

## Product datasheet

# Recombinant rat VEGFA protein ab92846

3 Images

### Description

<b>Product name</b>	Recombinant rat VEGFA protein
<b>Biological activity</b>	Biological Activity: As determined by the dose-dependent induced proliferation of Human umbilical vein endothelial cells (HUVECs) when compared to a standard. The expected ED <sub>50</sub> is 4.0-8.0 ng/ml.
<b>Purity</b>	> 95 % SDS-PAGE. Purity is approximately 97% as determined by RP-HPLC and reducing and non-reducing SDS-PAGE.
<b>Expression system</b>	Escherichia coli
<b>Protein length</b>	Protein fragment
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Rat
<b>Sequence</b>	MAPTTEGEQK AHEVVKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCAGC CNDEALECVP TSESNVTMQI MRKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC SERRKHLFVQ DPQTCKCSCK NTDSRCKARQ LELNERTCRC DKPRR

### Specifications

Our **Abpromise guarantee** covers the use of **ab92846** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE Functional Studies
<b>Form</b>	Lyophilized
<b>Additional notes</b>	Endotoxin Level: Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.

### Preparation and Storage

<b>Stability and Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
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Constituent: 0.165% Sodium phosphate

This product is an active protein and may elicit a biological response in vivo, handle with caution.

## Reconstitution

It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.

## General Info

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### Function

Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth.

### Tissue specificity

Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

### Involvement in disease

Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1) [MM:603933]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.

### Sequence similarities

Belongs to the PDGF/VEGF growth factor family.

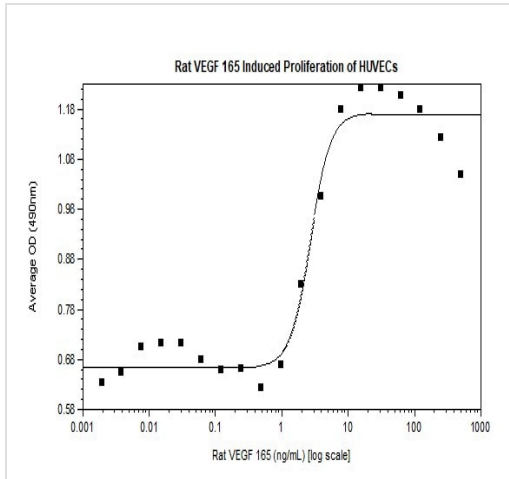
### Cellular localization

Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

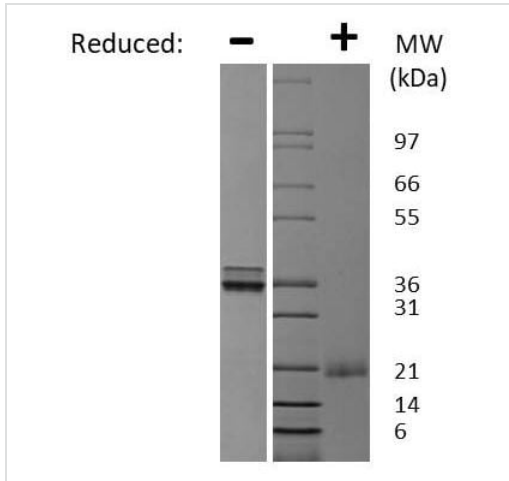
## Images

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Functional analysis of ab92846

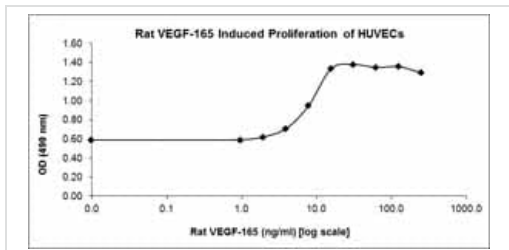


Functional Studies - Recombinant rat VEGFA protein (ab92846)



SDS PAGE analysis of ab92846 under non-reducing (-) and reducing (+) conditions. Stained with Coomassie Blue.

SDS-PAGE - Recombinant rat VEGFA protein (ab92846)



ab92846 used in Functional Studies.

Functional Studies - Recombinant rat VEGFA protein (ab92846)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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